

What is Claimed is:

1. An isolated corepressor peptide or fragment thereof derived from a nuclear receptor interacting motif of corepressor Nuclear Receptor Corepressor (NCoR) or Silencing Mediator of Retinoid and Thyroid receptors (SMRT) which binds to nuclear receptor ligand binding domains.
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2. The isolated corepressor peptide of claim 1 comprising GHSFADPASNLGLEDIIRKALMGSF (SEQ ID NO:4) or GTGLMTYRSQAVQEHA STMGLEAIIRKALMGKYDQWEE (SEQ ID NO:5), or fragments thereof.
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3. A method for evaluating selectivity of a ligand for a nuclear receptor comprising assessing a ligand's ability to increase or decrease binding of a coactivator peptide to the nuclear receptor and assessing the ligand's ability to displace from the nuclear receptor or bind to the nuclear receptor a corepressor peptide of claim 1.
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4. The method of claim 3 wherein the nuclear receptor is a PPAR of subtype PPAR α , PPAR δ or PPAR γ or LXR α , or LXR β .
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5. The method of claim 3 wherein the ligand's ability to increase or decrease binding of a co-activator peptide and to increase or decrease binding of a corepressor peptide is assessed by fluorescence polarization (FP), fluorescent resonance energy transfer (FRET), AlphaScreen, or surface plasmon resonance (SPR).
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6. The method of claim 3 further comprising assessing the ligand's ability to increase or inhibit binding of a heterodimeric partner of the nuclear receptor.
7. The method of claim 6 wherein the nuclear receptor is a PPAR of subtype PPAR α , PPAR δ or PPAR γ and the heterodimeric partner is RXR.
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8. The method of claim 3 further comprising assessing the ligand's activity in a standard nuclear receptor-ligand binding assay, a cell-based reporter assay or a disease-specific cell-based assay.

5 9. A method for quantitatively profiling selectivity of a test compound for a nuclear receptor comprising assessing a test compound's ability to increase or decrease binding of a nuclear receptor to a coactivator peptide and assessing the test compound's ability to displace from the nuclear receptor or bind to the nuclear receptor a co-repressor peptide of claim 1.

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10. The method of claim 9 further comprising assessing the test compound's ability to increase or inhibit binding of a heterodimeric partner of the nuclear receptor.

11. The method of claim 10 wherein the nuclear receptor is a PPAR of
15 subtype PPAR α , PPAR δ or PPAR γ and the heterodimeric partner is RXR.